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10/072,869	02/12/2002	Hiroshi Sasaki	Q68152	2417

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EXAMINER	
SELLERS, ROBERT E	
ART UNIT	**PAPER NUMBER**
1712	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/072,869	Applicant(s) SASAKI ET AL.
	Examin r Robert Sellers	Art Unit 1712

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) 6-8,11 and 13 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-5,9,10,12 and 14-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) 1-21 are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 and 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-10 and 12-21, drawn to a composition comprising monomer (A-1) with one cyclic ether structure, monomer (A-2) with at least two cyclic ether structures, latent cationic initiator (A-3) and solid resin (B), classified in class 528, subclass 409.

II. Claim 10, drawn to the composition of Group I further comprising a monool or polyol, classified in class 528, subclass 406.

The inventions are distinct, each from the other because:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an adhesive and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Claims 1-21 are generic to a plurality of disclosed patentably distinct species comprising:

(A-1) The monomers with one cyclic ether structure.

(A-2) The monomers with at least two cyclic ether structures.

(A-3) The latent cationic initiators.

(B) The solid resins.

Contingent upon the election of Group II, the items hereinabove and a particular species of monool or polyol.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation and corroborating fax with Raul Tamayo on June 6, 2003, a provisional election was made with traverse to prosecute the invention of Group I, and the following species

(A-1) The monomer of claim 4 wherein in formula (3), X is oxygen and R_9 is a C_4-C_{24} alkyl group;

(A-2) EKP-206 or EKP-207 which is an epoxidized poly(ethylene/butylene/styrene) or poly(ethylene/butylene), respectively, according to page 5, Figure 5 of the Technical Bulletin of the Shell Chemical Company;

(A-3) Rhodorsil 2074 which is (4-isopropylphenyl)(4-methylphenyl)iodonium tetrakis(pentafluorophenyl)borate according to Chemical abstracts accession no. 2001:663127 of the Polymer Preprints article by Sasaki and registry no. 178233-72-2;

(B) Regalite 1090 hydrogenated petroleum resin.

claims 1-10 and 12-21. Affirmation of this election must be made by applicant in replying to this Office action. Claim 11 is withdrawn from further consideration under 37 CFR 1.142(b) as being drawn to a non-elected invention. Claims 6-8, 11 and 13 are withdrawn as being directed to non-elected species of monomer (A-2).

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5, 9, 10, 12 and 14-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The EKP-206 and EKP-207 described on page 13, line 5 are not fully, clearly and concisely enabled in the absence of their identification as an epoxidized poly(ethylene/butylene/styrene) and epoxidized poly(ethylene/butylene) as verified by page 5, Figure 5 of the Technical Bulletin of the Shell Chemical Company.

The iodonium salt photo-latent cationic initiator 2074 manufactured by Rhodia, Inc. employed in Example 1 on page 23 is not fully, clearly and concisely enabled without its designation as Rhodorsil 2074 which is (4-isopropylphenyl)(4-methylphenyl)iodonium tetrakis(pentafluorophenyl)borate which is the art-recognized tradename and chemical name according to Chemical abstracts accession no. 2001:663127 of the Polymer Preprints article by Sasaki and registry no. 178233-72-2. The Rhodorsil 2074 should be inserted into the second paragraph on page 15 for a complete disclosure.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9, 10, 12 and 14-21 are rejected under 35 U.S.C. 102(a) as being anticipated by the Polymer Preprints article by Sasaki entitled "Photo-curable pressure sensitive adhesives using alkyl oxetane."

Sasaki shows a composition comprising the elected species of 3-ethyl-3-(2-ethylhexyloxymethyl)oxetane within the confines of monomer (A-1), Kration EKP 207 within the ambit of monomer (A-2), Rhodorsil 2074 as latent cationic initiator (A-3) and a hydrogenated petroleum resin tackifier.

Claims 1, 5, 9 and 14-21 are rejected under 35 U.S.C. 102(b) as being anticipated by PCT Publication No. WO 00/63272.

The PCT publication (page 44 table Example 6 and page 45, components *2, *3, *4, *6 and *7) shows a formulation containing 3-ethyl[3-(phenoxy)methyl]oxetane (component *2), a blend of alicyclic diepoxides (components *6 and *7), 3.8% by weight of triallylsulfonium hexafluoroantimonate cationic photoinitiator (component *3, 2 parts by weight per 52 parts by weight of combined Components A, B and C in the table) and 16 parts by weight of elastomer particles (component *4, 8 parts by weight per 50 parts by weight of Components A and B) which are embraced by claimed solid resin (B).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the PCT publication.

Although the claimed amount of monomer (A-2) having at least two cyclic ether structures of from 5-50% by weight is not exemplified, it is clearly within the purview to employ the alicyclic diepoxides in a proportion of from 5-80% by weight according to page 21, lines 16-22. It would have been obvious to lower the exemplified level to as low as 5% by weight in order to optimize the viscosity and reduce the fabrication time.

Claims 1-5, 9, 10, 12 and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent No. 848,294.

The European patent (page 3, lines 16-18) sets forth a blend of a compound having one oxetane ring (page 6, lines 29-53), an epoxidized copolymer of isoprene, ethylene, butylenes and styrene (page 9, lines 37-38), a cationic photoinitiator, and a petroleum resin (page 13, line 49).

Although the petroleum resin is not utilized in the examples, it would have been obvious to use the petroleum resin disclosed in the European patent in order to promote the adhesion of the blend.

Claims 1-5, 9, 10, 12 and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Nos. 11-140279, 11-152441, 10-158581, 5-171083, 5-171084, 7-62082 and 7-53711 in view of Japanese Patent Nos. 9-40670 and 9-328651.

The primary references except for Japanese '083, 084 and '711 set forth cationically polymerizable formulations derived from a monomer possessing a single oxetane group, a polyepoxide and a cationic polymerization initiator.

Japanese '711 espouses a cationically polymerizable blend of a compound bearing at least one oxirane ring per molecule which includes a monoepoxide within the limits of claimed monomer (A-1), a compound bearing at least two oxetane rings per molecule within the parameters of monomer (A-2) and a cationic polymerization initiator.

Japanese '083 and '084 disclose compositions derived from an epoxy resin, a compound containing one oxirane group, and a cationic initiator.

The claimed solid resin (B) such as the hydrogenated petroleum and/or rosin resin of claim 10 is not recited. Japanese '670 and '651 teach cationically polymerizable compositions prepared from epoxy resins, cationic photoinitiators and a petroleum resin or rosin.

It would have been obvious to incorporate the petroleum resin or rosin of Japanese '670 and '651 into the formulations of the primary references in order to improve the processability, adhesion and hardness (IT's of "Petroleum resins" and "Rosin").

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

PCT Publication No. WO 99/051181 and the Radtech '98 North America UV/EB Conference Proceedings article by Frances et al. are directed to blends of Kraton EKP 207 and iodonium borate salt cationic initiators.

Japanese Patent No. 7-126565 is directed to diaryliodonium salts or iron-allene cationic photoinitators for epoxides.

Mueller discloses the polymerization of polytetrahydrofuran in the presence of a cationic catalyst.

The Technical Bulletin of the Shell Chemical Company establishes the chemical names for the elected species of Kraton EKP 206 and EKP 207 epoxidized poly(ethylene/butylene(/styrene)).

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6/26/03